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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,157	01/15/2004	James F. Popelka	PP06385US00	4846
22885 7590 03/28/2007 MCKEE, VOORHEES & SEASE, P.L.C. 801 GRAND AVENUE SUITE 3200 DES MOINES, IA 50309-2721			EXAMINER WAGGONER, TIMOTHY R	
			ART UNIT 3651	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE		
3 MONTHS	03/28/2007	PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/758,157

Applicant(s)

POPELKA, JAMES F.

Examiner

Timothy R. Waggoner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed with respect to claims 1,20,30,40 and 50 have been fully considered but they are not persuasive. Applicant argues that Whitten teaches away from all detectors monitoring each emitter. Applicant cites sections of Whittens specification directed to a specific embodiment but Whitten also discloses in the description of figure 7 that "a minimum of three detectors are active for each individual emitter monitoring cycle" leaving the possibility and capability to monitor all detectors simultaneously furthermore USPN 4,252,250 and USPub 2003/0155367 both teach all emitters reading the output of each emitter. For the foregoing reasons claims 1,20,30,40 and 50 stand rejected.

Applicant's arguments filed with respect to claims 1,20,30,40 and 50 have been fully considered but they are not persuasive. Applicant argues that Whitten teaches away from having all emitters off for a time period between the sequential firing of individual emitters. Applicant cites the statement that "the timing sequence for each set monitoring cycle monitoring mode must be fast enough to ensure the smallest product will be detected" this statement and the language before it ie. "monitor each of the emitter/detector sets separately because of potential for light bleed-over" in combination indicate that the emitters must all be off for a set amount of time between monitoring phases to prevent bleed-over but not so long as to allow a falling object not to be detected. For the foregoing reasons claims 1,20,30,40 and 50

Applicant's arguments filed with respect to claims 1 and 20 have been fully considered but they are not persuasive. Applicant argues that that Whitten does not disclose the process of monitoring all detectors while the emitters are off for an "on" condition. The types of detectors used by Whitten are on any time they are receiving energy with in the bandwidth they are designed to receive, so in theory the detectors are always on as there is always some level of ambient energy being received by said detectors so any time the emitters are off the detectors remain on for this reason. Applicant also has some arguments related to malfunction detection, as this does not appear in the claim it self it was not treated. For the foregoing reasons claims 1 and 20 stand rejected.

Applicant's arguments filed with the respect to claims 2-19,21-29,31-39,41-49,51 and 52 have been fully considered but they are not persuasive. Applicant argues these claims are allowable as they are dependent on allowable dependent claims. As these claims remain rejected all dependent claims remain rejected. For the foregoing reasons claims 2-19,21-29,31-39,41-49,51 and 52 stand rejected.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 20-24,27-29 and 40-52 directed to the apparatus and claims 1-19 and 30-39 directed to the method of using the apparatus are rejected under 35 U.S.C. 102(b) as being anticipated by Whitten et al USPN 6,732,014.

Whitten discloses a detector for vended items comprising:

(Re claim 20) "a first support upon which is mounted a set of optical emitters" (310A figure 3A). "a second support member upon which is mounted a set of optical detectors" (350B figure 3B). "a controller operatively connected to each emitter and detector" (335A ,325A, 365B figure 3A,B). "an interface adapted for communication of the output signal" (325A,365B figures 3A,B).

(Re claim 21) "the first and second support members comprise a circuit board" (360B figure 3B).

(Re claim 22) "perimeter dimensions that do not exceed several inches by one-half foot" (figure 7).

(Re claim 23) "there are five emitters" (720 figure 7).

(Re claim 24) "there are five detectors" (725 figure 7).

(Re claim 27) "controllers is a microprocessor" (325A and 365B figure 3A,B).

(Re claim 28) "output signal is communicated to a interface to a master controller board of a vending machine" (130 and 150 figure 1).

(Re claim 29) "a vending machine" (205 figure 2).

(Re claim 40) "a set of several emitters spaced apart on one side of a vend area" (242 figure 2). "a set of several detectors spaced apart on another side of the vend

area" (252 figure 2). "a microprocessor operatively connected to each emitter and detector" (235 figure 2). "a program ... monitoring for a vend" (figure 1).

(Re claim 41) "a timer to time on and off of the emitters" (325A,375B figure 3A,B; processors control the timing and of all processes).

(Re claim 42) "a timer to time on and off of the emitters" (325A,375B figure 3A,B; processors control the timing and of all processes).

(Re claim 43) "a modulator to modulate the electromagnetic energy of the emitters" (325A,375B figure 3A,B; processors control emitters levels keeping them in the infrared band).

(Re claim 44) "signal is adapted for communication to a vending machine" (130,150 figure 1).

(Re claim 45) "signal is adapted for communication to a master controleler board of a vending machine" (130,150 figure 1).

(Re claim 46) "the signal turns a transistor on or off" (the signal from Whitten is capable of this).

(Re claim 47) "the signal operates a relay" (the signal from Whitten is capable of this).

(Re claim 48) "with a vending machine" (205 figure 2).

(Re claim 49) "vending machine is a snack vending machine with multiple rows and columns" (205 figure 2).

(Re claim 50) "a dispensing area" (222 figure 2). "a master controller controlling dispensation of vendible products" (220 figure 2). "a set of several emitters on one side

of the vend area" (242 figure 2). "a set of several optical detectors on another side of the vend area" (252 figure 2). "a microprocessor operatively connected to each emitter and detector" (235 figure 2). "a program ... monitoring for a vend" (figure 1).

(Re claim 51) "initialization of on and off times for the emitters" (106 figure 1).

(Re claim 52) "initialization of on time for the generated signal" (130 figure 1).

(Re claims 1-19 and 30-39) These claims are all directed to a method of use of the apparatus as indicated by applicant's representative. Whitten anticipates all the limitations of the apparatus as claimed and therefore would be capable of performing the methods as claimed.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 25 and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Whitten et al USPN 6,732,014. With respect to claims 25 and 26, Whitten does not disclose specific values for spacing between emitters and detectors. However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through

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routine experimentation and optimization, for one of ordinary skill in the art to arrive at the values claimed of the spacing between the emitters and detectors.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy R. Waggoner whose telephone number is (571) 272-8204. The examiner can normally be reached on Mon-Thu 8am-2pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRW

  
GENE C. CRAWFORD  
SUPERVISOR, PATENT EXAMINER